

Fig. 1

Fig. 3

Name	DNAzyme Sequenz
hgd1	5'-TCGGTCAGAggctagctacaacgaTGCGTTGCT-3'
hgd2	5'-GGCGTACGAggctagctacaacgaCTGCTCGGT-3'
hgd3	5'-GGCGGCGTAGgctagctacaacgaGACCTGCTC-3'
hgd4	5'-CTCGGGTCAGgctagctacaacgaCTGGGTAGC-3'
hgd5	5'-TCCTCTGCAGgctagctacaacgaCGGGGTCCT-3'
hgd6	5'-ACTCTGCAAggctagctacaacgaTCTGCGAGC-3'
hgd7	5'-GGGCGACGAggctagctacaacgaTCTGCAATT-3'
hgd8	5'-AAGGGGCGAggctagctacaacgaGACTCTGCA-3'
hgd9	5'-AAAACGGGAggctagctacaacgaCAGGTTGTA-3'
hgd10	5'-AGAATAAAAggctagctacaacgaGGGACCAGG-3'
hgd11	5'-ATGGCAGAAggctagctacaacgaAAAACGGGA-3'
hgd12	5'-AACTGGGTAggctagctacaacgaGGCAGAATA-3'
hgd13	5'-ATCCAAAAAggctagctacaacgaTGGGTATGG-3'
hgd14	5'-AGGGGAAGAggctagctacaacgaAAAAATCCA-3'
hgd15	5'-TTTTAAAAAggctagctacaacgaTATCTTGGA-3'
hgd16	5'-GTGGGGGGAggctagctacaacgaGGGAAGGCT-3'
hgd17	5'-GTTGAATGAggctagctacaacgaTTGCTTTCG-3'
hgd18	5'-GTCGTTGAaggctagctacaacgaGATTTGCTT-3'
hgd19	5'-GGCCCCGAaggctagctacaacgaCCGCGCGCG-3'
hgd20	5'-TCACCTCCAaggctagctacaacgaGGCCTCGGC-3'
hgd21	5'-CCGCCGTCaggctagctacaacgaCTCCATGGC-3'
hgd22	5'-GGTGGCTCaggctagctacaacgaCCAGCGCGG-3'
hgd23	5'-CGTTGAGCaggctagctacaacgaGGCGGGGTG-3'
hgd24	5'-CCGCGTCCAaggctagctacaacgaGTAGGAGTG-3'
hgd25	5'-CAGCGGGTAggctagctacaacgaTGCGCCGCG-3'
hgd26	5'-GCACATCCAaggctagctacaacgaCTCCTCCGG-3'
hgd27	5'-AAAAGCACaggctagctacaacgaCCACCTCCT-3'
hgd28	5'-TAAAAAGCaggctagctacaacgaATCCACCTC-3'
hgd29	5'-GACCGTCGaggctagctacaacgaGTTAAAAAG-3'
hgd30	5'-TTGCCTTGaggctagctacaacgaCGTCGATGT-3'
hgd31	5'-AGGGCGGGAggctagctacaacgaGTGGTTGCC-3'
hgd32	5'-TGGCCCTGAggctagctacaacgaCGAGTTTCC-3'
hgd33	5'-ACCTCTGCAggctagctacaacgaCGTGGCCCT-3'
hgd34	5'-CGGAGGGTAggctagctacaacgaCTCTGCACC-3'
hgd35	5'-GGCGGCACAggctagctacaacgaCTGGCTCCC-3'
hgd36	5'-CGGGCGGCAggctagctacaacgaACCTGGCTC-3'
hgd37	5'-AGGGATCCAaggctagctacaacgaGAAGCAGAG-3'
hgd38	5'-GGGTAGGGAggctagctacaacgaCCATGAAGC-3'
hgd39	5'-GGGCTGAGAggctagctacaacgaTCCAGGGGG-3'
hgd40	5'-GTGGATGGAggctagctacaacgaGTCTTGAG-3'
hgd41	5'-CGTGGTGGAggctagctacaacgaGGACGTCTT-3'
hgd42	5'-GGGGGTAGAggctagctacaacgaGGAGAGGGG-3'
hgd43	5'-GGAGGAGGAggctagctacaacgaGAGGCCGGG-3'
hgd44	5'-GCCCCCGAggctagctacaacgaAAGGAGGAG-3'
hgd45	5'-CCGGGGAGAggctagctacaacgaGTCCCTTCGG-3'
hgd46	5'-GGACAGCGAggctagctacaacgaGGGTCCGGG-3'
hgd47	5'-TGGGGTGGAggctagctacaacgaAGCGATGGG-3'
hgd48	5'-CTTGAGGCAggctagctacaacgaTCTTTCTCG-3'
hgd49	5'-CACCTGGTAggctagctacaacgaTTGAGGCAC-3'

Name	DNAzyme Sequenz
hgd50	5'-GCAGGGGCaggctagctacaacgaCTGGTACTT-3'
hgd51	5'-CCAGCTTCaggctagctacaacgaGCTGTCGGG-3'
hgd52	5'-GTGGGACGaggctagctacaacgaTCCAGCTTC-3'
hgd53	5'-GGAGTGGGaggctagctacaacgaGACTCCAGC-3'
hgd54	5'-ATGCTGCCAggctagctacaacgaGGGAGTGGG-3'
hgd55	5'-GGGCGGTCaggctagctacaacgaGCTGCCACG-3'
hgd56	5'-GAGGCTCCAggctagctacaacgaCCAGGGCGG-3'
hgd57	5'-GTGGGTTCGaggctagctacaacgaGAGGAGGCT-3'
hgd58	5'-AGGTGGTGAggctagctacaacgaGGGGTGGTG-3'
hgd59	5'-ACTCGGGCaggctagctacaacgaGTAGGGCGG-3'
hgd60	5'-GGAGCTGTAggctagctacaacgaTCGGGCACG-3'
hgd61	5'-GGACTTGCaggctagctacaacgaCCGAAGCCG-3'
hgd62	5'-GGGCCTGGAggctagctacaacgaTTGCATCCG-3'
hgd63	5'-TGTGCTGGAggctagctacaacgaCGGGCCTTG-3'
hgd64	5'-GTTCACACAggctagctacaacgaTCCCTGCCT-3'
hgd65	5'-CAGTTCACAggctagctacaacgaACTCCCTGC-3'
hgd66	5'-CACAGTTCaggctagctacaacgaACACTCCCT-3'
hgd67	5'-GTTGCCCCAggctagctacaacgaAGTTCACAC-3'
hgd68	5'-TCGCCGCCAggctagctacaacgaAGTGGGGTC-3'
hgd69	5'-CCCGTGCCAggctagctacaacgaCTCGCCGCC-3'
hgd70	5'-GGCGTTGCaggctagctacaacgaAGGTAGTGT-3'

Multiple Sequence Alignments GATA-3

Sequenz_1		GGCGCCGCTCTTGATAC TTT CAGAAAGAATGCATTCCCTGTAAAAA	60
Sequenz_2	****	-----	****
Sequenz_3	1	GGCGCCGCTCTTGATAC TTT CAGAAAGAATGCATTCCCTGTAAAAA	60
Sequenz_1	61	GAGAGAGAGAGAGAAGAAGAGAGAGAGACGGAGGGAGAGCGAGACAGAGCG	119
Sequenz_2	****	-----	****
Sequenz_3	61	TGAGAGAGAGAGAGAAGAAGAGAGAGAGACGGAGGGAGAGCGAGACAGAGCG	120
Sequenz_1	120	AGCAACGCAATCTGAC CGAGCAGGTCGTACGCCGCCGCTCCTCCTCTCTCTCTT	179
Sequenz_2	****	-----	****
Sequenz_3	121	AGCAACGCAATCTGAC CGAGCAGGTCGTACGCCGCCGCTCCTCCTCTCTCTCTT	180
Sequenz_1	180	GCTACCCAGGTGACCC GAGGAGGGACTCCGCCTCCGAGCGGCTGAGGACCCCGGTGCAGA	239
Sequenz_2	****	-----	****
Sequenz_3	181	GCTACCCAGGTGACCC GAGGAGGGACTCCGCCTCCGAGCGGCTGAGGACCCCGGTGCAGA	240
Sequenz_1	240	GGAGCCTGGCTCGCAG AATTGCAGAGTCGTGCCCCCTTTTTACAACCTGGTCCCGTTTTTA	299
Sequenz_2	****	-----	****
Sequenz_3	241	GGAGCCTGGCTCGCAG AATTGCAGAGTCGTGCCCCCTTTTTACAACCTGGTCCCGTTTTTA	300
Sequenz_1	300	TTCTGCCCTACCAGT TTTTGGATTTTTGCTTCCCCTTCTTCTCTTTGCTAAACGACCC	359
Sequenz_2	****	-----	****
Sequenz_3	301	TTCTGCCCTACCAGT TTTTGGATTTTTGCTTCCCCTTCTTCTCTTTGCTAAACGACCC	360
Sequenz_1	360	CTCCAAGATAATTTTT AAAAACCTTCTCCTTTGCTCACCTTTGCTTCCAGCCTTCCCA	419
Sequenz_2	1	-----TCCAGCCTTCCCA	14
Sequenz_3	361	CTCCAAGATAATTTTT AAAAACCTTCTCCTTTGCTCACCTTTGCTTCCAGCCTTCCCA	420
Sequenz_1	420	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	479
Sequenz_2	15	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	74
Sequenz_3	421	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	480
Sequenz_1	480	GACCTCCAGGCGGAC CGCCCTCCTCGCGGGTTCCGGGCCCGGCGAGAGGGC	539
Sequenz_2	75	GACCTCCAGGCGGAC CGCCCTCCTCGCGGGTTCCGGGCCCGGCGAGAGGGC	133
Sequenz_3	481	GACCTCCAGGCGGAC CGCCCTCCTCGCGGGTTCCGGGCCCGGCGAGAGGGC	540
Sequenz_1	540	GCGAACAGCCGAGG CCATGGAGGTGACGGCGGACCAGCCGCGCTGGGTGAGCCACCAC	599
Sequenz_2	134	GCGAACAGCCGAGG CCATGGAGGTGACGGCGGACCAGCCGCGCTGGGTGAGCCACCAC	193
Sequenz_3	541	GCGAACAGCCGAGG CCATGGAGGTGACGGCGGACCAGCCGCGCTGGGTGAGCCACCAC	600
Sequenz_1	600	CACCCCGCGGTGCTCA ACGGGCAGCACCCGGACACGACCACCCGGGCTCAGCCACTCC	659
Sequenz_2	194	CACCCCGCGGTGCTCA ACGGGCAGCACCCGGACACGACCACCCGGGCTCAGCCACTCC	253
Sequenz_3	601	CACCCCGCGGTGCTCA ACGGGCAGCACCCGGACACGACCACCCGGGCTCAGCCACTCC	660
Sequenz_1	660	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	719
Sequenz_2	254	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	313
Sequenz_3	661	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	720
Sequenz_1	720	GGTCAAGGCAAACACG TCCCGCCCTACTACGAAACTCGGTACGGGCCACGGTGCAGAGG	779
Sequenz_2	314	GGTCAAGGCAAACACG TCCCGCCCTACTACGAAACTCGGTACGGGCCACGGTGCAGAGG	373
Sequenz_3	721	GGTCAAGGCAAACACG TCCCGCCCTACTACGAAACTCGGTACGGGCCACGGTGCAGAGG	780
Sequenz_1	780	TACCTCCGACCCACC ACGGAGGCCAGGTGTGCCGCCCGCTCTGCTTCATGGATCCCTA	839
Sequenz_2	374	TACCTCCGACCCACC ACGGAGGCCAGGTGTGCCGCCCGCTCTGCTTCATGGATCCCTA	433
Sequenz_3	781	TACCTCCGACCCACC ACGGAGGCCAGGTGTGCCGCCCGCTCTGCTTCATGGATCCCTA	840
Sequenz_1	840	CCCTGGCTGGACGGCG GCAAAGCCCTGGGCAGCCACCACCGCCTCCCCCTGGAATCTC	899
Sequenz_2	434	CCCTGGCTGGACGGCG GCAAAGCCCTGGGCAGCCACCACCGCCTCCCCCTGGAATCTC	493
Sequenz_3	841	CCCTGGCTGGACGGCG GCAAAGCCCTGGGCAGCCACCACCGCCTCCCCCTGGAATCTC	900
Sequenz_1	900	AGCCCCCTTCCCAAGA CGTCCATCCACACGGCTCCCCGGGGCCCTCTCCGTCTACCCC	959
Sequenz_2	494	AGCCCCCTTCCCAAGA CGTCCATCCACACGGCTCCCCGGGGCCCTCTCCGTCTACCCC	553
Sequenz_3	901	AGCCCCCTTCCCAAGA CGTCCATCCACACGGCTCCCCGGGGCCCTCTCCGTCTACCCC	960
Sequenz_1	960	CGGCTCTGCTCTCTCT CTTGTGCGGGGGGCCACGCCAGCCCGACCTCTTACCTTCCCG	1019
Sequenz_2	554	CGGCTCTGCTCTCTCT CTTGTGCGGGGGGCCACGCCAGCCCGACCTCTTACCTTCCCG	613
Sequenz_3	961	CGGCTCTGCTCTCTCT CTTGTGCGGGGGGCCACGCCAGCCCGACCTCTTACCTTCCCG	1020
Sequenz_1	1020	CCACCCCGCCGAAGG ACGTCTCCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	1079
Sequenz_2	614	CCACCCCGCCGAAGG ACGTCTCCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	673
Sequenz_3	1021	CCACCCCGCCGAAGG ACGTCTCCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	1080

Sequenz_1	1080	TCGGCCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	1139
Sequenz_2	674	TCGGCCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	733
Sequenz_3	1081	TCGGCCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	1140
Sequenz_1	1140	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	1199
Sequenz_2	734	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	793
Sequenz_3	1141	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	1200
Sequenz_1	1200	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	1259
Sequenz_2	794	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	853
Sequenz_3	1201	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	1260
Sequenz_1	1260	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCCAAG	1319
Sequenz_2	854	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCCAAG	913
Sequenz_3	1261	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCCAAG	1320
Sequenz_1	1320	GCCCGGTCCAGCACAG AAGGCAGGGAGTGTGTGAAGTGTGGGGCAACCTCGACCCCACTG	1379
Sequenz_2	914	GCCCGGTCCAGCACAG ---GCAGGGAGTGTGTGAAGTGTGGGGCAACCTCGACCCCACTG	970
Sequenz_3	1321	GCCCGGTCCAGCACAG AAGGCAGGGAGTGTGTGAAGTGTGGGGCAACCTCGACCCCACTG	1380
Sequenz_1	1380	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCAGAAAATG	1439
Sequenz_2	971	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCAGAAAATG	1030
Sequenz_3	1381	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCAGAAAATG	1440
Sequenz_1	1440	AACGGACAGAACCAGC CCCTCATTAAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1499
Sequenz_2	1031	AACGGACAGAACCAGC CCCTCATTAAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1090
Sequenz_3	1441	AACGGACAGAACCAGC CCCTCATTAAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1500
Sequenz_1	1500	GGGACGTCTGTGCGA ACTGTGAGACCACCA CAACCACACTCTGGAGGAGGAATGCCAAT	1559
Sequenz_2	1091	GGGACGTCTGTGCGA ACTGTGAGACCACCA CAACCACACTCTGGAGGAGGAATGCCAAT	1150
Sequenz_3	1501	GGGACGTCTGTGCGA ACTGTGAGACCACCA CAACCACACTCTGGAGGAGGAATGCCAAT	1560
Sequenz_1	1560	GGGGACCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTTAAGAGCCC	1619
Sequenz_2	1151	GGGGACCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTTAAGAGCCC	1210
Sequenz_3	1561	GGGGACCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTTAAGAGCCC	1620
Sequenz_1	1620	CTGACTATGAAGAAGG AAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1679
Sequenz_2	1211	CTGACTATGAAGAAGG AAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1270
Sequenz_3	1621	CTGACTATGAAGAAGG AAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1680
Sequenz_1	1680	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAAACCCG	1739
Sequenz_2	1271	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAAACCCG	1330
Sequenz_3	1681	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAAACCCG	1740
Sequenz_1	1740	GCCGCCCTCTCCAGAC ACATGTCTCCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1799
Sequenz_2	1331	GCCGCCCTCTCCAGAC ACATGTCTCCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1390
Sequenz_3	1741	GCCGCCCTCTCCAGAC ACATGTCTCCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1800
Sequenz_1	1800	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1859
Sequenz_2	1391	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1450
Sequenz_3	1801	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1860
Sequenz_1	1860	CACCCCTCCAGCATGG TCACCGCCATGGGTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1919
Sequenz_2	1451	CACCCCTCCAGCATGG TCACCGCCATGGGTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1510
Sequenz_3	1861	CACCCCTCCAGCATGG TCACCGCCATGGGTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1920
Sequenz_1	1920	CAGCGAGAGTCCCTGC AGTCCCTTTTCGACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1979
Sequenz_2	1511	CAGCGAGAGTCCCTGC AGTCCCTTTTCGACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1570
Sequenz_3	1921	CAGCGAGAGTCCCTGC AGTCCCTTTTCGACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1980
Sequenz_1	1980	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAAATTATGTTTGCCACTTTGC	2039
Sequenz_2	1571	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAAATTATGTTTGCCACTTTGC	1630
Sequenz_3	1981	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAAATTATGTTTGCCACTTTGC	2040
Sequenz_1	2040	AAAGGAGCTCACTGTG GTGTCTGTGTTCCAACCACTGAATCTGGACCCCATCTGTGAATA	2099
Sequenz_2	1631	AAAGGAGCTCACTGTG GTGTCTGTGTTCCAACCACTGAATCTGGACCCCATCTGTGAATA	1690
Sequenz_3	2041	AAAGGAGCTCACTGTG GTGTCTGTGTTCCAACCACTGAATCTGGACCCCATCTGTGAATA	2100

Sequenz_1	2100	AGCCATTCTGACTCATATCCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAA-T	2158
Sequenz_2	1691	AGCCATTCTGACTCATATCCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAAT	1750
Sequenz_3	2101	AGCCATTCTGACTCATATCCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAAT	2160
Sequenz_1	2159	CTGAACATTGCATATAACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	2218
Sequenz_2	1751	CTGAACATTGCATATAACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	1810
Sequenz_3	2161	CTGAACATTGCATATAACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	2220
Sequenz_1	2219	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	2278
Sequenz_2	1811	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	1870
Sequenz_3	2221	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	2280
Sequenz_1	2279	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAAACTGCCAGTTTGTTCCTTT	2338
Sequenz_2	1871	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAAACTGCCAGTTTGTTCCTTT	1930
Sequenz_3	2281	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAAACTGCCAGTTTGTTCCTTT	2340
Sequenz_1	2339	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAATAAAAAAGAAAAAGAGAAAAG	2398
Sequenz_2	1931	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAATAAAAAAGAAAAAGAGAAAAG	1990
Sequenz_3	2341	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAATAAAAAAGAAAAAGAGAAAAG	2399
Sequenz_1	2399	A-----	2399
Sequenz_2	1991	AAAAAAAAAGAAAAAA GTTGTAGGCGAATCATTTGTTCAAAGCTGTTGGCCCTCTGCAA	2050
Sequenz_3	2400	AAAAAAAAAGAAAAAA GTTGTAGGCGAATCATTTGTTCAAAGCTGTTGGCC-TCTGCAA	2458
Sequenz_1	****	-----	****
Sequenz_2	2051	GGAAATACCAGTTCTG GGCAATCAGTGTTACCGTTCACCAGTTGCCATTGAGGGTTTCAG	2110
Sequenz_3	2459	GGAAATACCAGTTCTG GGCAATCAGTGTTACCGTTCACCAGTTGCCATTGAGGGTTTCAG	2518
Sequenz_1	****	-----	****
Sequenz_2	2111	AGAGCCTTTTCTAGG CCTACATGCTTTGTGAACAAGTCCCTGTAATTGTTGTTTGTATG	2170
Sequenz_3	2519	AGAGCCTTTTCTAGG CCTACATGCTTTGTGAACAAGTCCCTGTAATTGTTGTTTGTATG	2578
Sequenz_1	****	-----	****
Sequenz_2	2171	TATAATTCAAAGCACC AAAATAAGAAAAGATGTAGATTATTTTCATCATATTATACAGAC	2230
Sequenz_3	2579	TATAATTCAAAGCACC AAAATAAGAAAAGATGTAGATTATTTTCATCATATTATACAGAC	2638
Sequenz_1	****	-----	****
Sequenz_2	2231	CGAACTGTTGTATAAA TTTATTACTGCTAGTCTTAAGAACTGCTTTCCTTCGTTTGT	2290
Sequenz_3	2639	CGAACTGTTGTATAAA TTTATTACTGCTAGTCTTAAGAACTGCTTTCCTTCGTTTGT	2698
Sequenz_1	****	-----	****
Sequenz_2	2291	GTTTCAATATTTTCCT TCTCTCTCAATTTTCGGTTGAATAAACTAGATTACATTCAGTTG	2350
Sequenz_3	2699	GTTTCAATATTTTCCT TCTCTCTCAATTTTCGG-----	2731
Sequenz_1	****	-----	****
Sequenz_2	2351	GCAAAAAAAAAAAAAA	2365
Sequenz_3	****	-----	****

GGCGCCGTCTTGATACTTTTCAGAAAGAATGCATTCCCTGTAAAAA
AAAAAATACTGAGAGAGGGAGAGAGAGAAGAAGAGAGAGACGG
AGGGAGAGCGAGACAGAGCGAGCAACGCAATCTGACCGAGCAGGTCTGAC
GCCGCCGCTCCTCCTCCTCTCTGCTCTTTCGCTACCCAGGTGACCCGAGG
AGGGAATCCGCTCCGAGCGGCTGAGGACCCCGGTGCAGAGGAGCCTGGC
TCGAGAAATTGCAGAGTCGTCGCCCCCTTTTACAACCTGGTCCCCTTTTA
TTCTGCCATACCCAGTTTTTGGATTTTGTCTTCCCCTTCTTCTCTTTC
TAAACGACCCCTCCAAGATAATTTTAAAAAACCTTCTCCTTTGCTCACC
TTTGCTTCCCAGCCTTCCCATCCCCCACCAGAAAGCAATCATTCAACGA
CCCCGACCCCTCCGACGGCAGGAGCCCCCGACCTCCAGGCGGACCCGCC
CTCCCTCCCCGCGCGCGGTTCGCGGCGCGGAGAGGGCGCGAGCACAG
CCGAGGCCATGGAGGTGACGGCGGACCAGCCGCGTGGGTGAGCCACCAC
CACCCGCGCTGCTCAACGGGCGAGCACCCGACACGCACCACCCGGGCT
CAGCCACTCCTACATGGACGCGGCGCAGTACCCGCTGCCGAGGAGGTGG
ATGTGCTTTTAAACATCGACGGTCAAGGCAACCACGTCCCGCCCTACTAC
GGAAACTCGGTGAGGCCACGGTGCAGAGGTACCTCCGACCCACCACGG
GAGCCAGGTGTGCGCCCCCTCTGCTTCATGGATCCCTACCTGGCTGG
ACGGCGGCAAGCCCTGGGCGAGCCACCACCCGCTCCCCCTGGAATCTC
AGCCCCCTTCTCAAGACGTCCATCCACCAGGCTCCCCGGGCCCCCTCTC
CGTCTACCCCCCGGCTCGTCTCCTCCTTGTGCGGGGGGCCAGCCAGCC
CGCACCTCTTACCTTCCCGCCCCACCCGCGGAAGGACGTCTCCCCGAC
CCATCGCTGTCCACCCAGGCTCGGCGGCTCGGCCGCGAGGACGAGAA
AGAGTGCTCAAGTACCAGGTGCCCCCTGCCCCGACAGCATGAAGCTGGAGT
CGTCCCACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG
ACCCACCACCCCATCACCACCTACCCGCCCCAGTGCCCCGAGTACAGCTC
CGGACTCTTCCCCCAGCAGCCTGCTGGGCGGCTCCCCACCGGCTTCG
GATGCAAGTCCAGGCCCAAGGCCCGGTCCAGCACAGAAGGCAGGGAGTGT
GTGAAGTGTGGGGCAACCTCGACCCCACTGTGGCGCGAGATGGCACGGG
ACACTACCTGTGCAACGCTGCGGGCTCTTACAAAAAAGAACGGACAGA
ACCGGCCCTCTTAAGCCCAAGCGAAGGCTCTGCGAGCCAGGAGAGCA
GGGACCTCTGCGAACTCAGACCACCACAACCACACTCTGGAGGAG
GAAGCCAAATGGGACCCCTCTGCAAGCCTGGGCTCTACTACAAGC
TTCACAATAACAGACCCCTGACTGAAGAAGGAAGGOCACAGACC
AGAAACCGAAAACTAGCAATCCAAAAAGTCAAAAAAGCAGTGA
CTCACTGGAGGACTTCCCCAAGAACAGCTCTTAACCCGGCGCCCTCT
CCAGACACCTCCTCCCTGAGCCACCTCGCCCTTACGCCACCCACAGC
CACGCTGACCACGCCCCAGCCGACCCGCTCCAGCCTCCTT
TGGACCACACCACCCCTCCAGCTGACCCGCTGGCTAGAGCCCTG
CTCGAGCTCACAGGGCCCCCAGCGAGACCTGCACTCCCTTTCGACT
TGCAATTTTGCAGGAGCACTCAAGGCCTAAACGCGTGGATATTC
TTTTGAAGGCAGAAAGCAAAATGCTTGCCACTTTGCAAAGGAGCTC
ACTGCTCTTCCAACCACTGAATCTGGACCCCTCTGAA
AGCCCTCTGACTCATATCCCCTATTTAACAGGCTCTAGTGTCTGAA
AAAAAAGGCTGAACATGCAATAAATTATAAAGAAATCTCT
ACAAAGACTTTTGTCTGCTAGCTCAAGGCAAGGAAGCCAAG
AAGTTAAGGAATGGGAGAAAGCTGGAAATTAAGAAGAACTAG
CTCAATCAAAAGGACAACTGCCAGTTTCTTCTTTCACTGGCCA
CACTTCTTGTGCAATTAAGAAAGAAAAAAGAGAAAGAA
AAAAAAGAAAAATTTAGGCGAATCTTCTCAAAGCTTGGCC
TCTGCAAAGGAATACCACTCTGGGCAACAGCTTACCTCACCAC
TGCCATGAGGCTTTCAGAGAGCCTTTTCTAGGCCTACTGCTTTGA
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AGAAAGATGAGATTTATTCATCAATTAACAGACCGAACTCTCTA
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Fig. 4 A

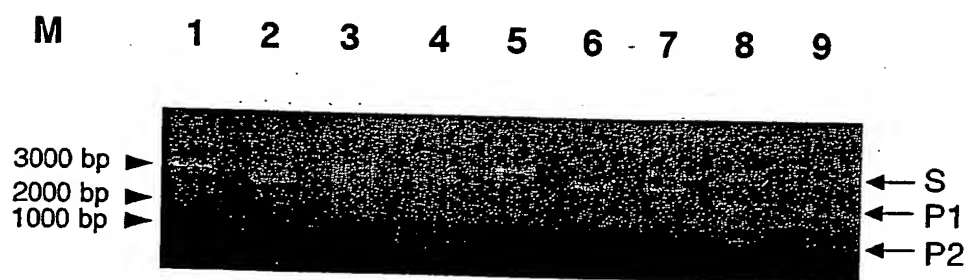


Fig. 5

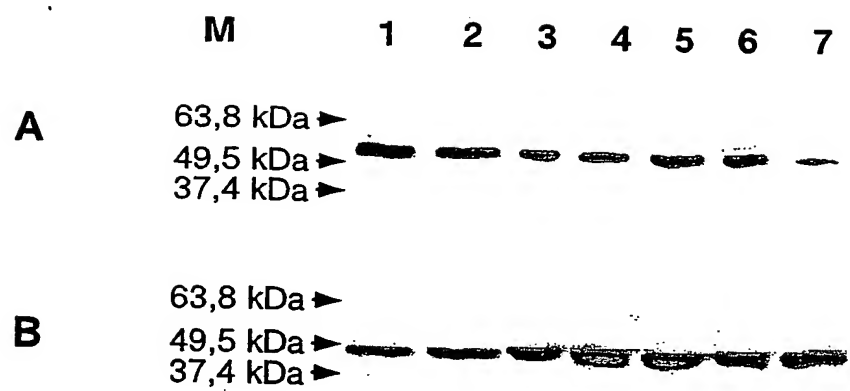


Fig. 6

Fig. 7

Name	DNAzyme Sequenz
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td2	GGGCTCTGAggctagctacaacgaGCCTGGCTT
td3	GGGACCCCAggctagctacaacgaCGGAGCCCG
td4	GGTGGGGGAggctagctacaacgaCCCACCGGA
td5	GGCGGGGGAggctagctacaacgaCCGAGGGCC
td6	GGGCTGGGAggctagctacaacgaGGGCAGGGA
td7	CGTCGAGGAggctagctacaacgaCCGCCCCCTC
td8	GGGCTGGCAGgctagctacaacgaCTTCCCGTA
td9	CGATGCCCAGgctagctacaacgaCCGGGGCGG
td10	GCTCCACGAggctagctacaacgaGCCCATCCG
td11	CCGGCTCCAggctagctacaacgaGATGCCCAT
td12	TCTCCGCAAggctagctacaacgaCCGGCTCCA
td13	CCGTCAGCAGgctagctacaacgaGTCTCCGCA
td14	TCCCCGGCAGgctagctacaacgaCGGCTCGGT
td15	CCCCCGCGAggctagctacaacgaGCTCGTCCG
td16	GTAGGGAGAggctagctacaacgaCCCAGGCTG
td17	GGGCGGGCAGgctagctacaacgaCAAGGCGCC
td18	CGGGAAGGAggctagctacaacgaTCGCCCCGG
td19	TAGTCCTCAGgctagctacaacgaGCGGCCCCG
td20	TCCCCGACAggctagctacaacgaCTCCAGTCC
td21	TTTCCCCGAggctagctacaacgaACCTCCAGT
td22	TGAGCGCGAggctagctacaacgaCCTCAGTTT
td23	GGACCACAAGgctagctacaacgaAGGTGGTTG
td24	CTTGGAACAggctagctacaacgaAACAGGTGG
td25	AAACTTGGAggctagctacaacgaCACAACAGG
td26	CTGATTAAAggctagctacaacgaTTGGACCAC
td27	TGGTGCTGAggctagctacaacgaTAAACTTGG
td28	TGATGATCAGgctagctacaacgaCTCTGTCTG
td29	TGGTGATGAggctagctacaacgaCATCTCTGT
td30	GCTTGGTGAggctagctacaacgaGATCATCTC
td31	ATGGGAACAaggctagctacaacgaCCGCCGTCC
td32	GAATGGGAAggctagctacaacgaATCCGCCGT
td33	TGACAGGAAggctagctacaacgaGGGAACATC
td34	AGTAAATGAggctagctacaacgaAGGAATGGG
td35	CACAGTAAAggctagctacaacgaGACAGGAAT
td36	GCCCCGCCAggctagctacaacgaAGTAAATGA
td37	CCACAAACAggctagctacaacgaCCTGTAGTG
td38	GTCCACAAAggctagctacaacgaATCCTGTAG
td39	CCACGTCCAggctagctacaacgaAAACATCCT
td40	CCAAGACCAggctagctacaacgaGTCCACAAA
td41	CCACCAAGAggctagctacaacgaCACGTCCAC
td42	GCTGGTCCAggctagctacaacgaCAAGACCAC
td43	GCTCTGGTAggctagctacaacgaCGCCAGTGG
td44	CTGCACCCAggctagctacaacgaTTGCCGCTC
td45	CACACTGCAGgctagctacaacgaCCACTTGCC
td46	CTTTCCACAggctagctacaacgaTGCACCCAC
td47	GCCTTTCCAggctagctacaacgaACTGCACCC
td48	TTCTTGGCAGgctagctacaacgaGCTGCCCTC

Name	DNAzyme Sequenz
TD49	GTGGACGTAggctagctacaacgaAGGCGGTTT
TD50	CCGGGTGGAggctagctacaacgaGTACAGGCG
TD51	CCTGGCGCaggctagctacaacgaCCAGTGCGC
TD52	CAAATGAAaggctagctacaacgaTTCCTGGCG
TD53	TTTCCCAAaggctagctacaacgaGAAACTTCC
TD54	ATTGTTGGAggctagctacaacgaGCCCCCTTG
TD55	TGGGTCACAggctagctacaacgaTGTTGGACG
TD56	TCTGGGTCAggctagctacaacgaATTGTTGGA
TD57	GCACAATCaggctagctacaacgaCTGGGTCAC
TD58	GGAGCACAAggctagctacaacgaCATCTGGGT
TD59	ACTGGAGCaggctagctacaacgaAATCATCTG
TD60	ATGGAGGGAggctagctacaacgaTGGAGCACA
TD61	TGGTACTTAggctagctacaacgaGGAGGGACT
TD62	GGGCTGGTAggctagctacaacgaTTATGGAGG
TD63	TCAACGATAggctagctacaacgaGCAGCCGGG
TD64	CCTCAACGAggctagctacaacgaATGCAGCCG
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TD71	AGGCAGTCaggctagctacaacgaGGCAATGAA
TD72	ATCTCGGCaggctagctacaacgaTCTGGTAGG
TD73	GCTGAGTAAggctagctacaacgaCTCGGCATT
TD74	TATTATCAaggctagctacaacgaTTTCAGCTG
TD75	GGGTTATTAggctagctacaacgaCAATTTTCA
TD76	AAGGGGTTAggctagctacaacgaTATCAATTT
TD77	CTCCCGGAAggctagctacaacgaCCTTTGGCA
TD78	GTACATGGAggctagctacaacgaTCAAAGTTC

Fig. 8

Multiple Sequenz Alignments T-bet

Seq_1	1	CGGCCCGCTGGAGAGGAAGCCCGAGAGCTGCCGCGCGCTGCCGGACGAGGGCGTAGAAG	60
Seq_2	1	CGGCCCGCTGGAGAGGAAGCCCGAGAGCTGCCGCGCGCTGCCGGACGAGGGCGTAGAAG	60
Seq_1	61	CCAGGCGTCAGAGCCCGGGCTCCGGTGGGGTCCCCACCCGGCCCTCGGGTCCCCCGCCC	120
Seq_2	61	CCAGGCGTCAGAGCCCGGGCTCCGGTGGGGTCCCCACCCGGCCCTCGGGTCCCCCGCCC	120
Seq_1	121	CCTGCTCCCTGCCATCCAGCCACGCGACCTCTCGCGCGCGGAGGGGCGGGTCTCTCG	180
Seq_2	121	CCTGCTCCCTGCCATCCAGCCACGCGACCTCTCGCGCGCGGAGGGGCGGGTCTCTCG	180
Seq_1	181	ACGGCTACGGGAAGGTGCCAGCCCGCCCGGATGGGCATCGTGGAGCCGGGTTCGGGAGA	240
Seq_2	181	ACGGCTACGGGAAGGTGCCAGCCCGCCCGGATGGGCATCGTGGAGCCGGGTTCGGGAGA	240
Seq_1	241	CATGCTGACGGGCACCGAGCCGATGCCGGGGAGCGACGAGGGCCGGCGCCTGGCGCCGA	300
Seq_2	241	CATGCTGACGGGCACCGAGCCGATGCCGGGGAGCGACGAGGGCCGGCGCCTGGCGCCGA	300
Seq_1	301	CCCGCAGCAACGCTACTTCTACCCGGAGCCGGGCGCGCAGGACGCGGACGAGCGTCGCGG	360
Seq_2	301	CCCGCAGCAACGCTACTTCTACCCGGAGCCGGGCGCGCAGGACGCGGACGAGCGTCGCGG	360
Seq_1	361	GGGCGGCAGCCTGGGGTCTCCCTACCCGGGGGGCGCCTTGGTGCCCGCCCGGAGCCG	420
Seq_2	361	GGGCGGCAGCCTGGGGTCTCCCTACCCGGGGGGCGCCTTGGTGCCCGCCCGGAGCCG	420
Seq_1	421	CTTCCTTGAGCCTACGCCCTACCCGCGCGACCCAGGCGGCGGCTTCCCCGGCGCGGG	480
Seq_2	421	CTTCCTTGAGCCTACGCCCTACCCGCGCGACCCAGGCGGCGGCTTCCCCGGCGCGGG	480
Seq_1	481	CGAGTCCTTCCCGCGCCCGCGGACCGCGAGGGCTACCAGCCGGGCGAGGGCTACGCCGC	540
Seq_2	481	CGAGTCCTTCCCGCGCCCGCGGACCGCGAGGGCTACCAGCCGGGCGAGGGCTACGCCGC	540
Seq_1	541	CCCGGACCCGCGCGCCGGGCTCTACCCGGGGCCGCGTGAGGACTACGCGCTACCCGCGGG	600
Seq_2	541	CCCGGACCCGCGCGCCGGGCTCTACCCGGGGCCGCGTGAGGACTACGCGCTACCCGCGGG	600
Seq_1	601	ACTGGAGGTGTCGGGGAAGTTCATTTGGGAACTAAAGCTCAAAACCACTGTTGTGGTCCAAGTT	660
Seq_2	601	ACTGGAGGTGTCGGGGAAGTTCATTTGGGAACTAAAGCTCAAAACCACTGTTGTGGTCCAAGTT	660
Seq_1	661	TAATCAGCACCAGACAGAGATGATCATCACCAGCAGGGACGGCGGATGTTCCCATTCCT	720
Seq_2	661	TAATCAGCACCAGACAGAGATGATCATCACCAGCAGGGACGGCGGATGTTCCCATTCCT	720
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Seq_2	721	GTCATTTACTGTGGCCGGGCTGGAGCCCAACAGCCACTACAGGATGTTTGTGGACGTGGT	780
Seq_1	781	CTTGGTGGACCAAGCACCCTGGCGGTACCAGAGCGGCAAGTGGGTGCACTGTGGAAAGGC	840
Seq_2	781	CTTGGTGGACCAAGCACCCTGGCGGTACCAGAGCGGCAAGTGGGTGCACTGTGGAAAGGC	840
Seq_1	841	CGAGGGCAGCATGCCAGGAAACCGCCTGTACGTCCACCCGGACTCCCCAACACAGGAGC	900
Seq_2	841	CGAGGGCAGCATGCCAGGAAACCGCCTGTACGTCCACCCGGACTCCCCAACACAGGAGC	900
Seq_1	901	GCACTGGATGCGCCAGGAAGTTTCATTTGGGAACTAAAGCTCAAAACCAAGGGGGC	960
Seq_2	901	GCACTGGATGCGCCAGGAAGTTTCATTTGGGAACTAAAGCTCAAAACCAAGGGGGC	960
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Seq_2	961	GTCCCAACATGTGACCCAGATGATTGTGCTCCAGTCCCTCCATAAGTACCAGCCCGGCT	1020
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Seq_2	1081	TATCTTTACTTTCCAAGAAACCCAGTTCATTGCCGTGACTGCCTACCAGAATGCCGAGAT	1140
Seq_1	1141	TACTCAGCTGAAAATTGATAATAACCCCTTTGCCAAAGGATTCGGGAGAACTTTGAGTC	1200
Seq_2	1141	TACTCAGCTGAAAATTGATAATAACCCCTTTGCCAAAGGATTCGGGAGAACTTTGAGTC	1200
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Seq_1	1261	TGGGGGAGATCACTACTCTCTCTCTACCCAACAGTATCCTGTTCCAGCCGCTTCTA	1320
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Seq_2	1321	CCCCGACCTTCTGGCCAGGCGAAGGATGTGGTCCCCAGGCTTACTGGCTGGGGGCCCC	1380
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Seq_2	1381	CCGGGACCACAGCTATCGGGCTGAGTTTCGAGCAGTCAGCATGAAGCCTGCATTCTTGCC	1440

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Seq_1	1501	TGGCTGGCCTGTGGC	CCCCAGTACCC	TCCCAAGATGGGCCCCGGCCAGCTGGTT	1560
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Seq_2	1561	TATGCGGACTCTGCCC	ATGGAACCCGGCCCTGGAGGCTCAGAGGGACGGGGACCAGAGGA	1620	
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Seq_2	1621	CCAGGGTCCCCC	TTGGTGTGGACTGAGATTG	CCCCATCCGGCCGGAATCCAGTGATT	1680
Seq_1	1681	AGGACTGGGCGAAGGAG	ACTCTAAGAGGAGGCGCGTGTCCCCCTATCCTTCCAGTGGTGA	1740	
Seq_2	1681	AGGACTGGGCGAAGGAG	ACTCTAAGAGGAGGCGCGTGTCCCCCTATCCTTCCAGTGGTGA	1740	
Seq_1	1741	CAGCTCCTCCCCTGCTGGGG	CCCCCTTCTCCTTTTGATAAGGAAGCTGAAGGACAGTTT	1800	
Seq_2	1741	CAGCTCCTCCCCTGCTGGGG	CCCCCTTCTCCTTTTGATAAGGAAGCTGAAGGACAGTTT	1800	
Seq_1	1801	TAACTATTTTCCCAACTGAGCAGATGACATGATGAAAGGAACAGAAACAGTGTTATTAGG	1860		
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Seq_2	2221	CTTTTCGTTGGCATGTGTGTTAATCCCTGATCCAAAAGAACAAATACACGTATGTTATA	2280		
Seq_1	2281	ACCATCAGCCCGCCAGGGTCAGGGAAGGACTCACCTGACTTTGGACAGCTGGCCTGGGC	2340		
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Seq_1	2401	ACATCTCAAGAAGCAAGATATTGTTTGTGGTGGTGTGTGGGTGTGTGTTTTTTCTTT	2460		
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Seq_1	2461	TTCTTTCTTTTATTTTTTTTGAATGGGGGAGGCTATTTATTGTA	2520		
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Fig. 8A

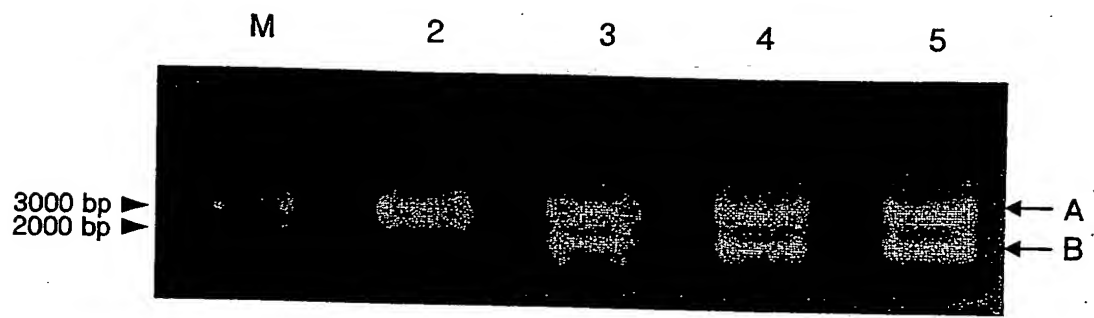


Fig. 9

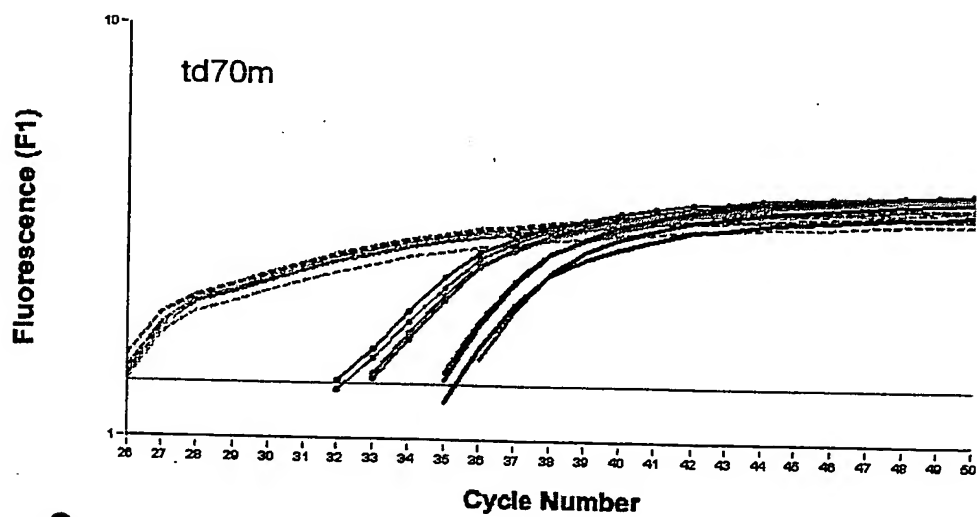
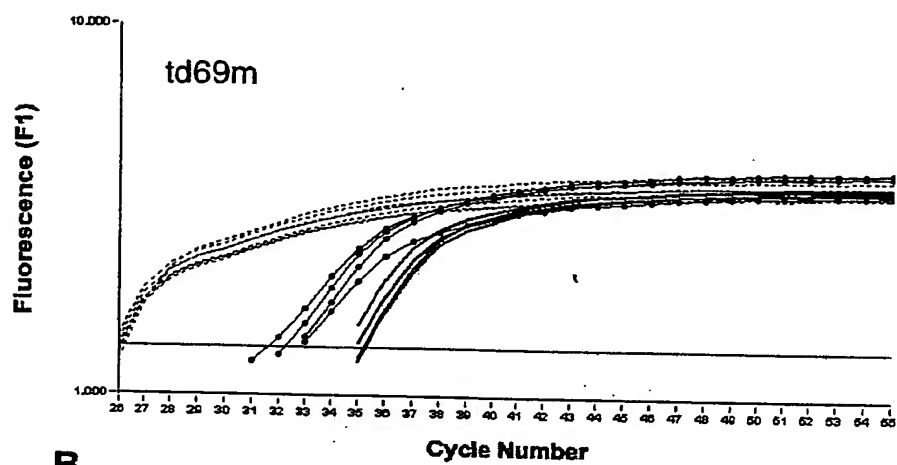
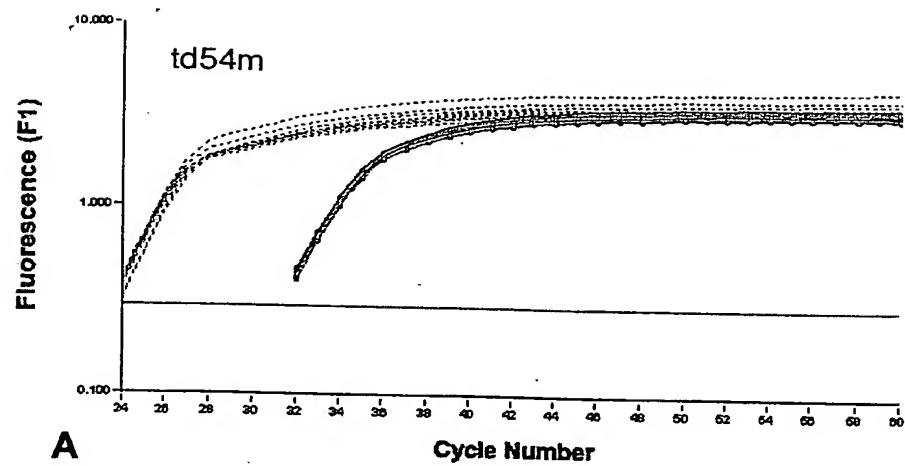


Fig. 10

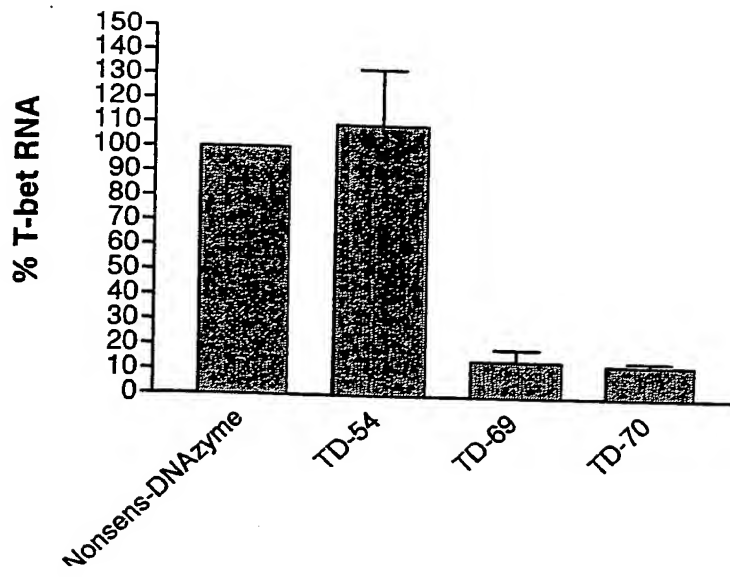


Fig. 11